

Decision rules under ignorance

What does it mean to say that you "know" or are "confident" that the odds are "really" 1-3? It could mean that you are willing to offer good odds that in a large class of decisions in which your feelings are comparable to this one, your proportion of "right predictions" or "correct decisions" will not be very far from $1/3$. A related belief is that you are very confident--and will bet good odds--that in a large class of gambles involving these events (to which you assign probability $1/3$ with this degree of confidence) with 50:50 money odds, you will come out ahead, and by an amount which you are willing to bet on within certain limits.

Neither of these things may be true about certain events to which you may assign probability $1/3$ "faute de mieux," because you cannot decide among three conflicting hypotheses or because you feel you have no reliable information about the likelihoods of three possible outcomes. You may not be willing to bet that betting on such an event in a large number of similar situations will result in winning "just about" $1/3$ of the time, nor that 50:50 bets will be profitable ~~most of the time~~ in the long run. You may not at all--perhaps unlike the above case--be willing to accept a 50:50 bet on this event for a large stakes (even though you are indifferent between small bets on two other events which are mutually exclusive and, together, complementary).